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THE GENESEE FARMER.

SATURDAY, SEPTEMBER 15, 1838.

'Vindex' on the Soils and Agriculture of Southern New-York, and Northern Pennsylvania.

We have received a long communication from a gentleman who signs himself 'Vindex," residing near the boundary line between this State and Pennsylvania, containing many important facts and suggestions relative to that section of country, with some things not suitable to our columns, or relevant to the subject; and with his leave we shall give the substance of his paper, omitting those parts above alluded to. "Vindex' is evidently acquainted with the the matters of which he treats, both in a scientific and practical point of view; an accurate and close observer; and with somewhat quick and sensitive feelings. The remarks of the writer have been made principally for the purpose of dissipating the prejudice which be believes to exist in some parts of the country against that important part of this State bordering on Pennsylvania, as well as the adjoining counties of that State—a prejudice which he thinks the Genesee Farmer, unintentionally doubtless, may have done something, in its remarks on hard-pan and the kindred soils, to perpetuate. While to this implied charge against the Farmer, we plead *not guilty*, in the most direct and unqualified manner, we must acknowledge that 'Vindex' has made out what would be called a strong case against public opinion generally. In this connexion we may be allowed a single remark respecting ourselves. In conducting the Farmer we hold ourselves inculpable to the sectional prejudice to which the writer alludes. In devoting our time and labors to advance the paramount interests of agrienlture, we shall, we trust, always bear in mind the fact that we are writing for the *whole country*, and not for a particular part or section. Our twelve thousand subscribers are distributed in every state and territory, and in almost every county of the Union, and the interests and necessities of all, we shall endeavor to keep steadily in view. To depreciate any part unjustly, or attribute merits that are imaginary to another, is what we shall not do; bnt no consideration shall prevent our freely declaring what we consider to be the truth with regard to any; or promulgating principles which we believe to be based on sound philosophy or confirmed by experience, however much they may conflict with the commonly received opinions or prejudices of the day.

The valuable papers of 'Holkam' on the nature of the soils referred to by 'Vindex,' and published in the Genesee Farmer, have proved most satisfactorily the excellence and fertility of those soils, as well as their geological or natural composition. In the valuable and finer grasses, and particularly in what are called the spring or summer grains, this section is pre-eminent. The roots, the cultivation of which lie at the basis of good husbandry, as furnishing an indispensable part of the rotation of crops, have not in former years received that attention which they have deserved. It appears, however, from the extract on this subject from 'Vindex' that this kind of culture is advancing rapidly, and promises to produce the happiest results. We the more rejoice at this, as from the first, the Farmer has at all times been the advocate of the root culture, and enforced its value and necessity, by every means in its power.

"The June number of the Monthly Farmer contains proof by measure, that the hard-pan lands of Susquehannah and Bradford counties in Pennsylvania grow more ruta baga upon the same extent of surface than most others in the Union, and we have good reason to exult at the suggestions made in their defence. To corroborate these statements we have neither ransacked books or consulted authorities; but we called at the dwellings of a few poor men, living upon lands whereon they were tenants at sufferance, and having no theory or object to defend or gratify, but what usually attends the cultivation of other men's possessions; from such men we obtained the following facts. They are from Bradford, Susquehannah, and Tioga counties.

Elisha Guard raised upwards of 60 bushels of ruta baga from 8 rods of land.

William S. Harvey raised about the same quantity as near as could be ascertained.

William Alsop raised 413 bushels from *about a quarter of an acre.*

L. D. Corbin raised 600 bushels from 89 perches, and the average crop of seven others was very near 800 bushels per acre. In the course of these enquiries we adverted to the letter of Secker Meylect, published in the Cultivator and republished in the Farmer, and were told that his crop of 1200 bushels per acre was by no means an uncommon occurrence. After leaving these men, we called upon Leman Turrell, John Baird, J. C. Sherman, and 8 others, men of a different character, and more deeply interested in the character and culture of the soil, and found their average crop of potatoes was 367 bushels per acre, and the average crop of the three highest was 483 bushels per acre."

Such incontrovertible statements as these, taken in connection with the well known fact that these lands are rarely equalled in the production of the clovers, will do more to establish the character of these soils for richness and fertility, and do away the prejudices against them, if such have existed, than volumes of theoretical deductions and fine-spun reasoning. That these counties would be found among our first root-growing, and consequently agricultural districts, we have not doubted since we had an opportunity of visiting some part of this section, and witnessed the deep loam that almost every where was found on the surface; and it gives us the greatest pleasure to find that our anticipations will so soon be realized. In the Southern counties of New-York, as well as the Northern ones of Pennsylvania, the root culture is making great progress, and if the present season is favorable, from five to to eight thousand bushels of roots will be raised by many farmers.

On the important subject of ploughing hard-pan lands 'Vindex' remarks:

"We might indeed rejoice if a remedy for all our sullen soils and wet subsoils was to be found in the mechanical contrivances to which we have been recommended; but the idea of making the subsoil prolific without bringing it to the surface and exposing it to the atmospheric influence, is to us the same hopeless task as making brick without straw. It is utterly irreconcilable with any system of husbandry which we are capable of comprehending. No soil can be fertile without the agency of light, of heat, of fermentation, and putrifaction; and besides, if the surface is hardly capable of producing root crops, grain, and clover, of what use can be the stirring of the ground below it? No soil can be productive, whatever may be its constituents, if buried two feet beneath an unproductive surface. This is more than the average depth of burying roots to prevent fermentation, and about the average depth of our hard-pan; and if the under stratum is made productive by stirring, (without bringing to the surface,) why leave it there, and why not bring it up and make use of it for some productive purpose, and put the upper surface below to be made productive by the same process. But the argument probably is, that the subsoil is injurious by holding water, and that this tendency is counteracted by stirring it with cold iron. Now we deny the fact, and of course must dispute the inference. Hard-pan, whether composed of clay, of sand, of rock, of marle, or any other retentive substance, is not injurious, provided there is 18 inches of productive surface above, which is less than the average in nearly all the southern counties: on the contrary, it is a substantial and decided benefit, retaining both moisture and manure, within the reach of plants, and never suffering them to escape.

But we are told that "by stirring the subsoil without bringing it to the surface, the same chemical changes take place that usually occur in a fallow, because the operation exposes them to the same influences of the sun and wind.' Now with respect and submissive deference to the high authority (London Magazine) from which this opinion emanates, we shall take the liberty of *thinking* that the man who advances it must be of doubtful intellectual sanity. How much sun can shine on it, or how much wind can fan it, when buried twenty inches or two feet beneath the surface, we shall leave to the wisdom of those who can see further into a millstone to determine. It is evident to the uninitiated, that the most active agents in fertilization, light, frost and caloric, with all the atmospherical gasses and agencies, are entirely excluded, or largely absorbed. It is admittad that rain may descend somewhat deeper, but unless absorbed by the earth this must be of doubtful utility. The absorbent power is the measure of fertility, and the holding of water without absorption, the cause of sterility; and if making it hold more, without increasing the absorbent power, be an advantage, they who adopt it are welcome to the invention. We would not be understood as objecting to deep ploughing and bringing the hard-pan to the surface: we considered the difference between the absorbent power of hard pan in the mass, and in a pulverized state, as worth ascertaining; and after a careful investigation have found it to so exceedingly small, that unless the experiment is conducted in the open air, it is hardly worth notice; even when conducted in the open air, it is not essentially different, but the *time in which* it becomes saturated is highly important. Deep ploughing, and burying long manure, have both a tendency to increase this important function, the first by exposing a large surface to the atmosphere, and the last by producing fermentation besides being itself an absorbent."

We invite the attention of the reader to the remarks of 'Vindex' on the culture of winter wheat in the district of country to which he refers:

"The only fault of the hard-pans of Southern New-York, is the winter-killing of winter wheat, and this fault is obviated or made much less serious by the extensive use of the spring varieties. In some localities this may extend to other cultivated crops, though the complaint is rarely made of any other; and after several years of that careful and anxious investigation demanded by the nature of the subject, we have come to the conclusion that the subsoil is not the most general cause of failure. We have duduring the past season witnessed the almost entire destruction of a beautiful crop (beautiful in the fall after it was sown) of winter wheat in the immediate vicinity of a lime-kiln, where calcareous matter abounded; where the subsoil (if the epithet is properly applied to a solid rock) was an olive colored argillaceous limestone,* at various distances from the surface; and our friends may now witness in the same neighborhood, a crop of the same grain upon a lot where hard-pan, as cold as chastity, is within twenty inches of the surface, which has escaped without injury. The injured crop was examined immediately after the snow had disappeared, and found almost entirely covered with a thin mucous pellicle or skin, not much unlike the thinnest web of a spider, or the mouldy inceptions of putrefaction. At this time the root was living, and we are firmly persuaded that a shower of rain sufficient to wash away this film or slimy covering would have let in the air and saved the crop. This covering was attributed by our neighbor, upon whose farm it appeared, to too great a weight of snow, but being unable to give any satisfatory cause for the escape of the neighboring crops, all of which were alike under the snow, we were more inclined to the opinion that it was an exhalation produced by some local peculiarity, in the surface soil, which had been prevented from escaping into the atmosphere, and which the plant was unable to bear. Whether the application of large quantities of lime, dung, or gypsum would not have corrected this peculiarity, will have to be left to future examination. We know from positive experiment that wheat is not so apt to winter kill upon a clover sod, as upon the ploughed land: and we are confirmed in some of our opinions by the fact that the cultivated grasses are rarely if ever affected by this malady—Clover, Timothy, Herdsgrass, and Orchardgrass, luxuriating throughout the whole of this region, and holding their place in the land with a degree of tenacity unexampled in the Middle and Northern States."

We may be permitted to add here that we have experienced on our own farm the effects of winter killing wheat alluded to by 'Vindex.' Three years since we lost sixteen acres of as fine wheat as we ever saw (that is in the fall) from the same cause apparently as that described above. As the snow gradually wasted, the wheat under this slimy covering appeared green and uninjured (the root we did

* Second Report of the Penn. Geological Survey, page 54.

not particularly examine at the time,) but it immediately turned white and dry under the influence of the sun, and the *whole* perished. This was on ground on which wheat rarely or never is killed by the more common process of having the roots lifted from the earth by the thawing and freezing weather of winter or early spring; an effect with which we are unfortunately too well acquainted, owing to the quantity of clay in some of our soils.

The following are the concluding paragraphs of the essay of 'Vindex;' and while they inculcate some sound agricultural doctrines, they also breathe an *amor patria*, a love of country, deserving all praise, and which we should be glad to learn is felt in other sections of the country, as deeply, as from our correspondent's remarks, it appears to be in the beautiful and fertile valley of the Susquehannah.

"We have made up our minds, whether on a safe or unsafe foundation, that there is no such distinction made by the hand of Nature as grass and grain lands. Some soils are richer than others, but the richness produces more grass as well as more grain. Some are wetter than others, but draining is as essential to good grass as to grain. Some retain grass longer than others, because heavier and richer; but they equally demand a rotation of crops. Indian corn may be an exception to this rule, as it does not, properly speaking, belong to the same genera or class of plants, but the different kinds of small grains are affected only by the deficiency of manures and the tillage they receive; and they will all grow abundantly where good crops of clover can be cultivated.

It may be indeed a mistaken apprehension of our soil and climate–it may be a delusion of that seducing syren–Hope—always receding from the grasp of men?—it may be a proud enthusiasm encouraging the awakening energies and directing the efforts of our inhabitants to noble pursuits; but is our firm, unalterable, irresistible conviction, that Southern New-York and Northern Pennsylvania will one day be the pride of their respective states; the boast of those who now pass them by with scoffing and with scorn. We have seen abundance of lands in both these states, to the north and to the south of the hard-pan regions, that make the very birds weep at their poverty as they fly over them. But our sons have to fashion their own destiny; they must cling to their native hills, amidst the efforts made to dishearten them, just as

"The child whom scaring sounds molest,
Clings close and closer to its mother's breast."

And the *amor patria* must never be extinguished by the yokes and impositions of the North or of the South; they are both taxing us for their vast public improvements, they are snatching from our lands the sceptre of the arts, they are subduing to their own advancement the oceans and the deserts of the West, and they are keeping us in the wilderness a passive spectacle between the rivalries that dignify and ennoble the race. But they have at last raised a spirit that will not be easily checked; our rights are beginning to be acknowledged, in every debate public opinion declares for them, and the lethargy that bound us down in misery and decrepitude, is giving place to an activity that the heart owns and the understanding ratifies. Northern Pennsylvania has, in addition to stupefying exactions and gratuitous imputations, been subjected to the conflicting claims of Connecticut jurisdiction; the original settlers became victims to this controversy; (as the massacre at Wyoming testifies,) they were half a century subjected to a succession of deceptions and prejudices; they were wearied, dejected, and ravaged;—the spirit was taken from the brave—the lips of the wise were sealed–all was silenced and fettered but thought–thought remained, murmuring, discontented, rebellious;—and memory—a severe but silent monitor, remains among them still. And shall it yet be said they have no country worth cultivating—that the revolutions progressing in the agriculture of the adjacent counties, are to be of no avail to them? Just emerging from the solitude of the forest, just in a state of transition and expectation, will they submit to all the agricultural panaceas and catholicons that are prescribed by men who can know nothing of their abilities or their wants."

SIZE OF FARMS.

We have before entered our protest against the disposition which some of our farmers manifest, to add farm to farm, till their domains become of unmanageable size, and all the small farms in the vicinity are swallowed up, and the owners find a home in the new lands of the wide West. We disapprove of this course for several reasons, some of which we will lay befere the reader. By lessening the number of laborers on a given number of acres, as is the case where half a dozen farms are melted into one, the price of labor is much increased, and the getting in, or the securing of crops in good order and at a proper season, difficult, if not impossible. The scarcity of laborers in the grain-growing districts of Western New-York is great, and is greatly increasing; and the system of enlarging farms has a direct tendency to add to the evil.

Small farms are a source of greater profit in most cases, or in other words, they return a larger interest on the capital invested, than large farms. There is usually a greater proportion of labor put upon small farms than large ones, and the products are usually in an increasing ratio to the labor expended. The well-managed garden is by far the most productive part of a farm, and a small farm is much more readily brought to such a state, than a large one.—There is many a man who would undertake to put fifty or one hundred acres into high cultivation, who would shrink from commencing on five hundred; and the cause mentioned above—the lessening the number of laborers—has the effect of preventing a proper cultivation. There may be exceptions to this rule, but they are so rare, that they rather confirm than invalidate it.

But the proper test of the question is the actual state of the small and large farms—the comparative husbandry of those parts of our own, or other counties, densely populated, and their actual prosperity. Judging by this rule, the advantages of small farms will we think most clearly appear. In our own country we have but to contrast the thickly-settled farming districts of Dutchess and Ontario, or some of those in the counties of York and Lancaster, where the farms are of necessity mostly small, with the plantation system farther south, or the majority of the large farms at the north. The differences in the cultivation, in the fences, in the crops, and in the general aspect of the farms or the country, is too marked to be mistaken. In the districts to which we have for the sake of example referred, where the farms rarely exceed one hundred and fifty acres, and are frequently much smaller, the cultivation has rapidly improved, the production and profit has reached a high point, and the face of the country wears an aspect of prosperity and happiness which cannot be seen in the districts where small farms are unknown.

The same remarks hold true with regard to those countries in Europe where the farming population is the most dense, and the farms, whether held in fee simple, or on the tenant system, are small. Belgium, parts of Germany, Poland, and England, are sufficient proofs of this. So in China, where every acre of valuable land supports its man; and so it will be every where, where the capabilities of the soil are developed by the aids of science and the skill of the cultivator.

As a general rule, it may be remarked that the state of cultivation in any agricultural district, may be determined with great precision from a knowledge of the number of farms into which the district or county is divided.—Where they are numerous, there will be the highest state of improvement; the cultivators are more in contact with each other; improved methods of agriculture spread with greater rapidity; there is more emulation, and more liberal feeling; and if such men as Coke in England and Stinson of Saratoga have succeeded in converting large farms into gardens, so far as regards appearance and profit, the fact that such instances are so very rare, proves that a system of large farms, is not as well adapted to a prosperous agricultural society as that of small ones.

WHEAT WORM.

No apology can be necessary for introducing this subject so frequently into the columns of the Farmer. The extent of the interest involved in the progress of the wheat worm can only be estimated by those who have traversed Western New-York, and witnessed the quantity of wheat annually sown in this district. We make the following extract from the Seneca Observer, for the purpose of calling the attention of farmers to the statements made in it, and particularly the one that the worm continues its ravages after the wheat is ripe and put in the barn.

We have had the impression, in common with most others, that after the berry had become hard, the ravages of the worm ceased, or was only continued on such kernels as were attacked before the wheat had become ripened. We have within a few days examined wheat in which worms were found in abundance, and could find no kernels injured, except such as from their shrunken and pale appearance had evidently suffered when in the milk, or before the berry had become ripe. That the *weevil*, the product of a bug, destroys the grain in the mow or the granary, is well known; but that the *worm*, the product of a fly, does the same, we think requires further examination and proof before it is fully admitted. Should such prove to be the fact, it would indeed prove to be an alarming feature in the history of the wheat worm. At the east, where its ravages have been the most extensive and longest continued, we have never heard any apprehensions of injury after the wheat had ripened and was gathered. We have instituted some experiments having a bearing on this matter, and we hope farmers generally will lend their aid in elucidating this point. Is not the noise spoken of occasioned by the crawling of the worm and the rustling of the chaff, rather than by its feeding? and does not the pressure in a mow of wheat cause the speedy death of far the greater part of the worms in the gathered grain? It is well known that when wheat is threshed immediately after gathering, the worms will be many times more numerous than in the same wheat, if left in the barn for one or two months before threshing.

"It is curious as well as alarming to observe the operations of this destructive worm. It commences its work early, and continues it late. When in the field, it can be heard making a noise much resembling that of the silk worm while eating. After it commences, it devours with all greediness, until the crop is gathered; and, what is still worse, and perhaps not *generally known*, it continues its work of destruction, *after* the crop is gathered. Of this fact there can now be no doubt. It has been witnessed by many of the most observing farmers of our neighborhood. This insect can be heard in the mows and stacks, and on examining the heads of wheat, they are found to contain many of these destroyers. This is the more alarming to the wheat grower, as it is next to impossible for him to thresh out his grain as soon as harvested, owing to the other necessary labor that is pressed upon him at this season of the year—the completion of his haying, and the preparing of his fallow ground for another crop. Yet he must thresh his wheat or lose a goodly portion of what has been gathered."

We do not allow ourselves to indulge in the gloomy anticipations of the concluding paragraphs of the article in the Observer. We remember that when the Hessian fly became so destructive, and its ravages extended so rapidly, many were found who fancied that wheat could not again be grown in the United States. Such predictions have been utterly falsified by the event; and such we do not will be the result in regard to the grain worm. But yet we see no reason for deserting the fair fields of Western New-York, or abandoning the culture of wheat. Partial failures may indeed be expected; but the beautiful wheat that finds its way in such quantities to our market affords conclusive proof that our fields yet yield their increase, and that Providence has not ceased its kindness and its blessings.

WARMING HOUSES.

Some of our subscribers and correspondents, who propose building houses, have requested some information as to the best method of heating them during our winters. To this may serve as an apology, should one be deemed necessary, for the introducing of a topic more properly belonging to another season of the year.

The saving of fuel is daily assuming a greater importance among the inhabitants of this country, where forests are rapidly disappearing, or where, as in many portions of the wide west, the country has always been destitute of timber. The broad fireplaces of our primitive mansions have been superseded by stoves; and to supply these with fuel where a number are required, as in the usual method of warming houses, is found to occasion heavy drafts on the income of most individuals. The great waste of heat that takes place in all the ordinary stoves and fireplaces, has turned the attention of many to science to the providing a remedy for the evil, and efforts to provide a suitable temperature at a less expenditure than is usually incurred. Various methods have been suggested for economizing heat, some of which

shall notice. All are on the principle of warming a house by a single fire, and all are more or less efficient for that purpose.

A few years since, Mr. Fessenden, Editor of the New England Farmer, devised, and patented we believe, a plan for warming rooms by hot water, and the system has been acted upon to a considerable extent in some of the eastern cities and large manufactories. It is founded on the well known fact that warm water always rises, and will continue to do so until the whole mass is brought to the boiling temperature, should the heat be continued to that point. A copper boiler is placed in the lower part of the building to be warmed, and pipes of copper connected with the boiler rise and pass through the various rooms to be warmed. These pipes, as well as the boiler, are water tight, and are filled to the top with water.—When the fire is kindled, the water in the boiler being first warmed rises in the tubes, and displaces the cold water, which sinks into the boiler to be heated in its turn. Thus the circulation is kept up, and the rooms are gradually and equally warmed by the hot water contained in the pipes. This method has been highly approved for heating green houses, the heat being considered less drying and injurious to growing plants than air heated by direct contact with iron stoves. That it will come into general use can hardly be expected, however, the apparatus requiring a nicer adjustment than can in ordinary cases be expected. It has one great advantage to recommend it, and that is, fires can hardly ensue from the use of such pipes; a difficulty which renders the ordinary stove most objectionable.

Several plans for warming rooms with heated air have been devised, one of which was described in the 6th vol. of the Farmer; but as our list of subscribers has since that time greatly increased, we shall for their benefit give the plan there presented, and which has, where adopted, succeeded admirably. The apparatus "consists of a large box stove, surmounted with two flat cast iron drums, and these again by two sheet iron ones. These four drums are made to communicate with each other, and with the stove by short pieces of pipe, joined to their alternate ends. The smoke and heated current of air, after it leaves the stove, is thus broken in its course eight times, and is deprived of its heat before it finally passes away. The heat is communicated to the air outside the drums, which rises in large volumes about them in consequence of the increased temperature; and is retained from escaping by a brick wall around the whole apparatus, except the door of the stove which is left even with the outside of the wall. A chamber is thus formed, from which the heated air (in tubes) is at once conducted to any part of the house. The apparatus is placed in a small open cellar, and renders all fires above stairs unnecessary." Perhaps if the drums were placed vertically, instead of horizontally, as suggested by the inventor, the current from the stove would be sooner and more effectually deprived of its heat.

In Prof. Silliman's Journal for April, 1838, there is a communication on this subject from a gentleman in Virginia, in which the objections against this mode of warming houses are pointed out and obviated. His dwelling was warmed by such a furnace and air chamber, and as the air was admitted into the chamber of the furnace from the hall, or basement room, the air ascended to the parlors loaded with coal dust and other impurities, This evil was at once remedied by obtaining the air in pipes from without the house. This, besides obviating the difficulty of the dust, furnished a constant supply of fresh air. In rooms warmed by heated air, (and the difficulty attends nearly in an equal degree those warmed by a common stove,) it is found that the thermometer indicates a higher temperature in the upper part of the room than in the lower part, frequently as much as six or eight degrees, thus keeping the feet almost constantly cold, while the person is comfortable in other respects. This state of the air, reverses the injunction of Boerhave, to keep the feet warm and the head cool, and as far as its influence extended was injurious to health. As the rooms were tight, it was evident that the warm air after parting with its caloric settled to the floor, and remained there causing the reduction shown by the thermometer. To remedy this, a pipe was led from the floor to the bottom of the air chamber in the furnace, and the cooled air passed off so rapidly, that when a supply of fresh air was admitted by a pipe into the parlor to keep up the purity of the air, the quantity of which could be regulated by a valve, the thermometer gave a difference of only a degree and a half between the lower and upper part of the room. This arrangement has been tested for five years and has been perfectly satisfactory.

It may be here remarked, that where it is required to give out heat, as in the case of the stove and drums to the air chamber, rough and black bodies are far preferable to bright or polished ones; and for the same reason, the pipes that convey the heated air from the air chamber to the several rooms, should be smooth and bright, that the heat may not be given out on its passage. That a house may be warmed in this way from a single fire, does not admit of a doubt; and that it is far more economical than the usual process, is equally clear. We may, however, be permitted to suggest to those about to build, that a little additional expense in building will do much more towards making a house comfortable, than a greater sum after it is built; and that it is better to shut out the cold air, than to devise ways and means for heating it, after it is once admitted. This is the true economy, and this our climate demands of us.

Since writing the above we have seen in the London Chronicle an account of a new invention for warming rooms, which promises to supersede all others. A stove six inches in diameter and eighteen inches high, is enclosed in a cylindrical case of thin copper, the bottom of which, as well as that of the stove, is perforated for the admission of air, and the top of which is furnished with a damper or regulator to determine the heat. Such an apparatus will warm a room 25 feet square and 12 feet high; does not require to be fed with fuel but once a day, and the expence of fuel daily is four pence. The fuel is charcoal. This fireplace has the form of a small column, is moveable, and may be made ornamental. It is evident from the fact of there being no flue, or chimney required, that the charcoal is prepared in such a way as to prevent the formation, or secure the absorption, of carbonic gas; and since the patent has been secured, this preparation is all that remains a secret in the apparatus. Should it realize the benefits prophesied of it in the English journals, we may soon expect the method will be transplanted to our shores, and the wonderful properties of 'Joyce's Heating Apparatus,' as it termed, be tested among ourselves.

From Colman's Report.

MANURES.

Much and increasing attention is paid throughout the county to the saving of manures and the formation of compost. Vastly more remains to be done. In many parts of the county, cellars are considered a necessary appendange to the barn, where the manure is sheltered from the sun; and, by some of the most careful, from the external air likewise. A Danvers farmer, on whose good judgment I place great confidence, expresses his strong conviction, that the value of his manure is doubled in a closed cellar, in comparison with it under the former mode of exposure to the sun, and air, and rain. In most of these cases, the barn is placed on a side hill; the cellar is high enough to load in and turn the team and cart; and a trap door is in the barn floor, so that bog-mud, litter, or other refuse, may be easily thrown in to be formed into compost by the store hogs, which are put there to work, and which faithfully earn their living. In two places, I found provision made for saving all the liquid manure from the stalls and the barn yards. It was conveyed by gutters into a capacious cistern, from which it was occasionally pumped into a watering cask, like that used in the streets of cities, and dirtributed on the grass ground.—This was done with great advantage. The liqid manure of a large herd of cattle, could it be properly husbanded, would be of equal value as the solid manure. The subject of saving manures, and collecting and compounding them, is a matter which cannot be too strongly pressed upon the attention of farmers. It is the very life-blood of successful agriculture.

The subject of the application of manures, whether in a perfectly green and unfermented, or in a decomposed state, has been matter of much inquiry among the Essex farmers. The general impression is, that they should be used in a green state, as their most valuable parts are lost in the progress of decomposition. The philosophy of manures is as little understood as the philosophy of digestion. Nature draws a veil over many of her processes, which no prying curiosity has been able to raise, and no solicitude has induced her to uncover these operations. By what means the food received into the stomach goes, in its wonderful subdivisions and changes, to the formation of blood and bone, muscles and skin, hair and nails, is a matter about which we know as much as we know how the food of plants is taken up and elaborated, and goes, according to seed which is sown, to the formation of the stem and leaves, the coloring and taste, the flowers and fruit. It may operate as a stimulant, waking the dormant powers of the earth into action. It may serve as the substance, out of which the plants are to be formed; and to a degree, the evidence of this is perfect. It may so affect the earth and the atmosphere, that these great reservoirs of the elements of vegetable and animal life, may at once furnish their proper and required contributions. But conjencture here is in a great measure idle.—We may talk very learnedly on the subject without knowing any thing about it, or being able to communicate any valuable information. On this matter, experience and intelligent observation must be our guides. In actual bulk, manure, which is thoroughly decomposed, loses one-half. Its activity, its power of producing heat, one of the ascertained principles of vegetable life, is likewise lost. On these accounts, it is obviously best to apply it green. The experience of intelligent farmers almost universally confirms this. But unfermented manure, if applied immediately to the roots of plants, may, by too much action, or too much heat, or supplying their food in too lavish or too concentrated a form, destroy them. There is no danger of this when manures are spread and ploughed under the soil, or scattered over its surface. But where their immediate action is desired in the soil, it is important, before they are taken out of the yard, that they should be in a partially decomposed state, or rather in an active state; and for that reason, they should be turned over and thrown into heaps in the cattle yards in the spring, that they may become in a degree warm before they are applied. If they are to be applied directly to the roots of crops, they should be either mixed with earth, or so far advanced in their decomposition, that no evil may result from the heat of their first action; and that they be so subdivided and dissolved as to be in a condition to be at once taken up to the absorbent vessels of the plants.

These views will explain what I wish to say in regard to our great crop, Indian corn; and what long experience and observation have confirmed. The question is often asked, shall the manure be spread or placed in the hill? I answer, do both. Its immediate action is needed to bring the plant forward as soon as possible; and therefore partially decomposed manure should be placed in the hill. It is equally necessary that the plant should not suffer from want when its roots spread themselves beyond the hill in pursuit of food. The unfermented manure, spread and ploughed in lightly, will be in a condition for the use of the fibrous roots when they advance to receive it. Another question often proposed is, should the manure which is spread be ploughed in deeply, or covered lightly, or simply laid on the surface? If the plant to be cultivated be a tap-rooted plant, it will find the manure, though it should be buried deeply. If it has a spreading and fibrous root, like all the cereal grains, the nearer it is to the surface, without being entirely exposed on the top of it, the more available it is to the growth of the plant. If laid upon the surface and not covered, much of it must inevitably be lost by the sun and rain and wind. In respect to Indian corn, especially recollecting the cold seasons of the two last years, it is important by every possible means to get the plant forward as fast as possible; and for that reason to select the warmest and the driest land; to manure with fine manure in the hill, and with unfermented manure spread broad cast; and to plant as soon as the land can be made dry and warm enough to receive the seed. There is no crop that will better reward the most liberal cultivation.

In respect to the manuring of wheat, fermented and finely dissolved manures may be safely applied the year of its being sown; but not so with unfermented manures.—In general, it is best that the crop which precedes the wheat, rather than the wheat itself, should be manured.

In regard to the application of manures to potatoes, the almost universal opinion has been, that when manured in the hill, the seed should be laid upon the manure. Many farmers have reversed this practice; and now place the manure upon the seed, they say, with superior advantage.

Besides barn manures, slaughter-house manure has been used with great effect; but it is necessary it should be mixed with loam. Night soil, mixed in the proportion of one part of night soil to four of loam or fine gravel, has been used with extraordinary efficacy, upon peat or bog meadow. Muscle bed is much used, especially by the Danvers farmers, for their onions and vegetables for the market. It costs in Salem about one dollar for a large

horse load, and is applied liberally. At Manchester, where it is quite accessible, it is used with great advantage either as a top-dressing or ploughed in. At Beverly, I have seen its excellent and lasting effects as a top-dressing on grass land. A farmer in Danvers states that a gondola, containing eight four-ox loads of muscle bed, will deliver its cargo near to New Mills, for seven dollars. This is a low price. He is accustomed to spread six or seven loads to the acre, in winter, when frost will render it pliable. It will do well to apply it once in four or five years; oftener than this, it binds the land and renders it hard.

He says, it is of excellent use when applied to land which is to be laid down to grass with barley or oats.—Its effects are lasting; and no other application will be required for years.

In the town of Essex, a great amount of clams are dug for fish bait. The shells are much used for manure. The keeper of the alms-house in Essex, whose management is highly creditable, says, "as to the value of clam shells for manure, I think the broken and the whole shells very useful to low land, either to be spread on or ploughed in. They render the ground light and warm, and very durable. They likewise enrich the land very much." The same may be said of oyster shells, which are obtained in some quantities in the cities.

The great amount of squashes mentioned in a former part of my report, as obtained from two acres of land, is in some measure to be ascribed to the use of fish oil or blubber oil. The farmer, liviug near the fishing village in Lynn, obtains in the winter time a great quantity of fish livers and garbage. From this he procures the oil. After his casks are emptied of their oil, he fills them with water, which remains some time; and this water, thus considerably charged with oil, he applies to his squash vines. The effects are powerful.

One farmer, whose farm lies on the sea, has this year made some trials of fish as a manure. The Munhaden, Alewives, or Hardheads as they are called, come to the shores in the early part of the season, in great numbers, and are easily taken in seines. In the southern parts of this state, and Rhode Island, they are used in great quantities; either spread upon the grass land, or laid near to, or placed in, the hill of corn. They are very powerful; but their effects not lasting. The animal matter contained in them is considerable; and the bones are composed of phosphate of lime, which is a strong and active manure. The great objection to their use is, that to a person not interested, they render the air extremely offensive. Not so to those who find a profit in their application. To most men, a golden breeze is always fragrant. There are other marine manures of great value. I have found sea sand, put in the hill of potatoes, in low land, of great efficacy. My experience in this matter is not singular. The silicious matter divides the soil; and the salt which adheres to it serves to stimulate the plant.—Sea sand has been used with advantage at Sandy Bay. The marine plants are used with very beneficial results. The eel-grass is of little value excepting as litter. Nothing seems more grateful or healthful to swine than an abundance of this grass in their sties. It serves to increase the compost heap; but it becomes light and does not leave much when dried. Rock weed and kelp are valuable when ploughed in; but they are used to most advantage when applied directly as a top-dressing upon grass land. Then their effects are remarkable, and no more efficacious manure can be used. If left in heaps for any length of time, they soon become heated and decomposed; and are gone.

The refuse of the comb manufactories, horn tips and horn shavings, are greatly valued as manures. The refuse of the glue manufactories, are used with great advantage. Ashes, leeched or crude, have been applied by different individuals with various success. A farmer of high authority in Newberry, states:—"I think leeched ashes very valuable to spread on grass land; likewise for onions and grain. I use twenty or thirty cart loads. I gave this year three dollars per load of fifty bushels." A respectable farmer states that he deems them of no use, unless applied in conjunction with other manure, and then of great efficacy. In their application upon a rich loam to corn, both in the hill and spread round the hill at the first hoeing, I have seen no beneficial results from them. The experience of J. Buel, Esq., of Albany, he told me, in the use of ashes, coincides with mine. Leeched ashes, or soap-boilers' waste, which contains always a quantity of lime, I have used with advantage for wheat. These different results may depend upon soil, season, modes of application, or various circumstances, which we have not yet been able to determine. There can be no doubt of their efficacy and utility in some cases. There are many good authorities to this effect.

The ashes of Anthracite coal have been spread upon grass land in Gloucester, with obvious advantage. Peat ashes have been used in Newbury on grass ground with much advantage; but in excess, or when frequently repeated, their effects are stated to be injurious.

The use of gypsum in the interior of the country, has been successful; but not so on the seaboard. In Haverhill, Andover, and Methuen, its effects are marked;—and, in some cases, are as distinctly observable in parts of a field on which it has been used, where the other parts have been omitted in the distribution, as the enclosures is by the fences. The testimony of an experienced and careful farmer in the interior is subjoined. "As to gypsum, I have used it with good success. It is the opinion of many of our farmers that it injures the land. But from actual observation, I have been led to believe otherwise. There are pastures in our vicinity, in which plaster has been used twenty years without ploughing; and they are now the best pastures in the vicinity. I thnk, that in some instances, our crops have been doubled by the use of it. We usually apply about two and a half bushels to the acre." This is a large application; and it is questionable, whether the benefits are large in proportion to the quantity applied. In Berkshire county a bushel to an acre is deemed ample.

Of the ploughing in of green crops for enriching land, I know of but one decisive experiment; and this made by one of the most intelligent and best friends of the farming interest in the country. This was made in 1832-3; and honored by the premium of the Essex Agricultural Society. This was a crop of buckwheat ploughed in when in full flower. "The committee say, on examining the land on which the experiment had been made, they found the growing crop thereon was in a much more promising and flourishing state, and much better sustained the severity of the drought, to which all lands in that vicinity were then exposed, than the crops of corn which were then growing on the contigious ground of a similar soil; and which had been cultivated and manured in the ordinary manner." Besides the ploughing in of the green crop, the field was manured in the same manner as the other lands with which it is here compared.

The price of manure in Essex county, is extraordinary. Three dollars and a half a cord for stable manure have been paid at the stables, in Methuen; $4 50 in Andover; and I have known $6 paid in Salem for compost of night soil and muscle bed. A farmer in Middlesex, told me he was content to pay $5 50, for unmixed cow manure in Lowell, and cart it a distance of four miles. The expenses and trouble of transportation are often fully equal to half the cost of manure. It is surprising to find farmers willing to pay such prices; and it would be well to inquire, whether it would not be expedient to keep one man, whose sole business it should be, whenever the team could be spared, to collect the materials for a compost heap, which are to be found in abundance in almost every vicinity for the labor of going after them. At the prices above-named, manure may well be called the gold dust of the farmer.

I am unwilling to quit this homely subject without remarking, what always strikes me with great force, that beautiful and sublime miracle of the divine Providence, by which the very refuse, which man casts out and loathes, returns to bless him in the verdant fields, and the teeming harvests, in the most fragrant flowers, the most delicious fruits, and the most substantial products.

The use of clover sowed among grain and even among corn for ploughing in as the means of renovating the soil, has not prevailed within my knowledge in Essex county; but is commended to their attention as likely to be eminently beneficial. For this purpose we recommend most strongly the June, southern, or early clover so called.

No considerable experiments in the use of lime have come under my notice. A farmer in Haverhill, who has applied lime as a top-dressing upon his grass lands, is disappointed in his expectations of advantage from it. Extensive beds of clay-marl have been discovered; and this has been applied with great advantage on peat lands or bog meodows.

The Circassian Horse.

The Circassian horse, who is here called a "Tshii," is a prime favorite with his owner. In elegance of make, beauty of figure, and suppleness of limb, he is in no ways inferior to the Arabian; from his peculiar kind of training and the peculiar character of the country, I know no other of his kind who is a match for him in enduring fatigue and privations, or sure-footedness in traversing a precipitous line of territory. When the Circassian first breaks in his horse he begins by throwing a halter round his neck, and draws it so tight that one should infer it was his intention to strangle him. In this state the animal is dragged round and round until he is almost exhausted, or at least till his courage is supposed to be sufficiently cooled down; he is ridden and exercised for a short time, and in a few days becomes as docile and obedient to his master as a dog. It would not be easy to name any part of the world where the horse is better treated, nor can any one be more skilful in managing him than the Circassian. His secret seems to consist in treating kindly on all occasions; no blow is ever given him, and the consequence is that he is always full of mettle and playfulness, and, to all seeming, more delighted to obey than afraid of disobeying his master. Part of his acquiremenis is to swim and attain adroitness in every little art which may assist his master in mountain warfare; in fact, he ultimately becomes as keen and cunning, particularly in escaping pursuers, as if he had borrowed his master's wits. I have frequently seen a Circassian lay himself down at his owner's feet, and lie as still as if he had been shot dead, while the owner concealed himself behind him, or stand as motionless as a gun-rest, while his master laid his piece upon his head, took aim, and fired it off. It is incredible the complete perception which the horse here acquires of every word his master says to him; and whatever our boasted civilization may have made us, we are wretchedly behind the simple-hearted Circassian in the science of treating a horse, as well as in securing his instant obedience by affectionate conduct towards him. No wonder that it should be a rare occurrence to meet with a vicious animal in Circassia. The horses, which are bred from their earliest age in a farm-yard, are so gentle that the very children play with them, and as soon as they are fit for use they allow a man to mount and ride them without scarcely the necessity for applying any violent means of breaking them.—*From private notes.*

Selection of Seed Wheat.

RICHMOND, KY., AUGUST 6th, 1838.

To the Editor of the Franklin Farmer:

SIR—Having derived much valuable information from your interesting paper, I feel the injunction upon me, as an imperfect *quid pro quo*, to communicate to you the subjoined manner of selecting seed wheat.

Many years ago, a farmer in this quarter, who cultivated the same variety of wheat and in the same manner as did his neighbors, was known to have a yield of a third more to the acre. Upon inquiry as to the cause, the unsatisfactory answer was given—"I sow barrel seed."—The neighbors purchased of him their seed wheat, and the first year had a yield equal to his; but selecting their seed as formerly, the second and third crops were but little, if any better, than was raised by them previous to their purchase of seed. They again purchased, and their fourth crop was equal to the first, but their fifth and sixth crops were like their second and third. How to solve this apparent mystery, caused many a neighborhood consultation and discussion. The vender of the seed, saw too inviting a prospect to make money from the sale of seed wheat to induce him to disclose the manner of its preparation, and he struggled to keep it concealed. It was ultimately discovered, however, and was as follows:

When you are ready to get out your wheat, place a barrel or box in your stack yard, open at one end; before you pass the bundle to the treading floor, give it one or two strokes across the open end of the barrel or box, by which, the best matured grains will shatter off; then winnow and use for seed.

Thus selected it will be far preferable to the seed prepared by running it through a course seive: for it is known to every observant farmer, that many of the largest grains of both wheat and rye are unripe or diseased, and yet they do not shatter out as easily as those which are perfectly ripe.

I have ten acres of Baden corn in full shoot, giving promise of a very large yield to the acre.

Respectfully, W. C. G.

SALT FOR MANURE.

But very little salt is used for manure in this country, and but very few cultivators are aware of its virtues for this purpose. In England a great deal is used, and numerous experiments there show conclusively that it is very beneficial. The cheapness of salt in England renders it more profitable there than it would be here; of course it would not be advisable to use it so extensively here as it is used in that country; yet there is no doubt that it might be considerably used to advantage in this country on and near the sea board and in the interior near salt manufactories, where it can be obtained at a low price.

Besides its valuable effects in promoting vegetation, it is of great advantage in destroying insects, and if it has no other effect than this, it might, in many cases, be profitably used, especially on old ground. We have heard some gardeners say that they could not raise good turneps and cabbages on old ground without a liberal use of salt.

An Englishman informs us that in his country farmers sow about 700 pounds of salt on an acre of tillage and it is considered an excellent manure; they sow about 500 pounds on grass lands, wet and dry, and its good effects are lasting; it destroys moss and increases the crop very much. He observes that a neighbor of his had his crop of wheat much injured by angle worms as was supposed, as they were very numerous indeed; the next season the same piece of land was manured with salt, and the next morning after it was put on an abundance of worms were found dead on the surface; the crop of wheat was very large that season.

A farmer in this country observes that 12 years ago he ploughed a piece of grass land that was *run out*, having been mowed many years in succession, and bore nothing

of consequence, not having hardly sward enough for the turf to hold together to turn over. He dressed it with barn manure. The piece contained about 30 square rods, on one half of which he sowed a bushel and a half of salt, and harrowed it in. The turneps on the salted land run to tops as it was too rich by having both kinds of manure, but the crop of grass has been one-fourth larger ever since, and it now produces a good crop, while the other is nearly *bound out*.

It is stated in English works that from 7 to 15 bushels of salt are usually sowed on an acre; and exact experiments show that where it is used alone as a manure or with most other kinds of manure, it adds much to the produce of most all kinds of crops.—*Yankee Farmer.*

From the Farmers' Cabinet.

Soiling Neat Cattle.

The system of soiling has strenuous opponents, as well as many ardent advocates. But I believe that the system has never been fully settled by thorough and long tried experiments. A system is not to be established, nor overthrown in a day. We do not arrive at certain results in agricultural improvements by jumping conclusions. All improvement is the result or consequence of steady, progressive and judicious means. Those who undertake experiments are apt to abandon them at once, and in disgust, if success does not attend their first effort. This is wrong. It is important for us in establishing results to view both sides. It is altogether necessary that we know the failures of attempted experiments. It is as essential as it is to be assured of successful results. All tend to increase the store of general knowledge. And knowing wherein there has been a failure, and the course pursued, we can then enter into an investigation of the causes. Let no one be discouraged because a first or second effort is not crowned with success. A farmer has this advantage, that he can experiment on a *small* scale. The soiling system, as I before remarked, has not been satisfactorily settled. Its opponents contend—

I. That the soiling of cattle *in the house during the whole of the year*, is not only not beneficial, but positively injurious. This position is maintained by the following grounds,—1. It is natural. 2. Animals, thus kept, are deprived of air and exercise, and the selection of their food. In the experience of some farmers, cattle thrive much better in the fields, or open air, than when housed.

On the other hand the advocates of this system say—

I. *That it is a considerable saving of land*, that is, one acre of cut grass soiled being equal to three acres of the same field pastured. The grasses grow much more rapidly in consequence of not being trampled upon.

II. *It is a great saving of food*, for when say the compilers of the Complete Grazier, "animals are suffered to go upon the field, many plants are necessarily trodden under foot and bruised, or partly buried in the earth, in which state they are greatly disrelished by cattle, and are suffered to run to waste; a circumstance which never could occur, if the practice of cutting were adopted." If the consumption of plants is an object, that object is obtained by soiling, for all who have paid attention to the subject must have observed that cattle will readily eat plants cut, and given to them when housed, which they would discard in the pasture; yet, according to the authority above quoted, it is known that they will food, when thrown to them on the ground, which they will reject when given in the stall. Many of the grasses which are sweet and succulent when young, and which cattle eat with the greatest avidity, are quite offensive when suffered to get into ear, and are thereby lost; but by this system of cutting, no loss can occur from this quarter. Plants rejected by one class of animals, when presented to them, even when housed, are not on that account less acceptable to others; indeed they appear to be eaten with greater avidity. "Thus grass, or other food, that has been *blowned or breathed upon* by any animal for a considerable time, becomes unpleasant to other beasts of the same species, but not so to stock of another class or variety; for them, indeed, it appears to acquire a higher relish."

III. It is contended by the friends of the cutting system that the balance, so far as regards the *health and comfort of cattle*, is decidedly in its favor over that of pasturing. Cattle are not only less liable to accidents, but do not suffer the same inconveniences or annoyances to which they are subject when exposed to the sun in the open air—they suffer much less from heat, flies, &c., and it is perfectly reasonable to suppose that they take on flesh more readily. Tranquility and ease are essential; otherwise animals cannot thrive. An instance in point was cited by one of your correspondents, (see Cab. Vol. ii. page 295,) from which it appears that animals housed for fattening, and well fed, did not take on fat, owing to the circumstance of their becoming lousy, in consequence of fowls roosting over them. The reason why they did not thrive is obvious—when cleansed of the vermin they fattened well. Heat, restlessness, the terrible annoyance of flies, &c., when cattle are exposed, as they must frequently be in pastures, operate against them.

IV. The Complete Grazier asserts that the proportioned increase of manure obtained by soiling and stall feeding abundantly evince their superiority over pasturing. "Manure is the life and soul of husbandry; and when tillage is an object of attention, there can be no comparison between the two modes of consumption, especially in regard to manure obtained by soiling live stock during summer with green food, for in consequence of the increased discharge of urine during that season, the litter, of whatever substance it may consist, is speedily converted into dung."—p. 81.

Nicholson, in his Farmers' Assistant, refers to a communication from Dr. Thaer, of Hanover, detailing the result of the experience of Baron de Bulow, and others: He lays down the following as facts, which he says, are incontrovertible.

"1. A spot of ground, which, when pastured, will yield only sufficient food for *one* head, will abundantly maintain *four* when left in the stable.

"2. Soiling affords at least double the quantity of manure from the same number of cattle: for the best summer manure is produced in the stable, and carried to the fields at the most proper period of its fermentation; whereas, when dropt on the meadow, and exposed to the action of the air and sun, its power is much wasted.

"3. Cows which are accustomed to soiling, will yield much more milk, when kept in this manner, and fattening cattle will increase much faster in weight.

"4. They are less subject to accidents and diseases—they are protected from the flies which torment them in the fields during the warm weather; and they do not suffer from the heat of summer."

Many other advantages are enumerated. Grazing also has its advantages. Experiments, however, render it certain that soiling, under favorable circumstances, is the most profitable. The Hon. Josiah Quincy, of Massachusetts, ascertained about 1820, that seventeen acres of land, under the soiling system, supported as much stock, and in as good, if not better condition, as had previously required fifty; and Sinclair states, that thirty-three head of cattle were soiled from the 20th of May to the first of October, 1835, on seventeen acres and a half, of which fifty were necessary in pasture. *The saving of land was consequently thirty-two and a half acres.* From my own experience and observation, I am fully satisfied that there is no mode by which cultivated grasses will pay so well as by soiling. With us Jersey farmers, who can so readily derive the great advantage of top dressing by marl, lime, &c. it is nevertheless an object to turn all to the best account.

T. D.

Burlington Co., July 23d, 1838.

From the Farmers' Cabinet.

TURNEPS.

In the spring of 1837, wishing to make an experiment in the culture of turneps, I selected an acre which had been well ploughed the previous fall. The preceding crop was potatoes, yielding about two hundred bushels to the acre. In the month of May the ground was ploughed again, and well harrowed. Cattle were then turned in occasionally upon the ground, until the 15th of June, when it was ploughed again, well harrowed, and marked out into drills running north and south. I then divided the patch into four equal parts. To one I gave a common dressing of stable manure; another, an extra quantity of compost manure; in both cases it was spread upon the drills, the seed sown immediately, and the whole rolled. The next day planted the remaining two sections; on one I sowed ten bushels of fine lime with two and a half of wood ashes. The other remaining quarter of an acre received a dressing of two bushels of bone dust. Those dressed with manure appeared about the same time above the soil, and a season, seemed to take the lead of their neighbors. They were all kept equally clean of weeds and the soil was retained, as far as possible in a finely pulverized state, so as to enable it to imbibe the moisture of the atmosphere. They all escaped the fly—not so the turnep worm, as sections 1 and 2 suffered by it; those parts dressed with stable manure and compost maintained apparently their ascendancy until about the 15th of July, when the others appeared to take the lead. The soil was then again well pulverized, and the whole cleared from all extraneous plants. As the turneps required thinning, commenced that operation about the latter end of July, and must have furnished many bushels at least forty, to my stock. Unfortunately, I kept no account. On the 10th of November, they were gathered in with the following result:

Section 1. Dressed with stable manure, yielded 98 bushels, rate of 390 per acre.

Section 2. Dressed with compost, yielded 124 bushels, rate of 496 per acre.

Section 3. Dressed with lime and wood ashes, yielded 185 bushels, rate of 740 per acre.

Section 4. Dressed with bone dust, yielded 213 bushels, rate of 852 per acre.

The turneps were not sent to market, but fed to stock, an excellent feed they proved to be, and added not a little to my manure. The interest on the land, and the expenses of cultivation, &c., including the manures, amounted to $29 75 They were worth to me, as fed to stock, at least 25 cents per bushel, but say 20 cents; this would be $124 for the yield of the acre, which will leave $94 25 per acre as the proceeds. Now if we farmers can but average the half of this, we shall be doing a clear business. I do not clear the fifth part of it on my wheat lands. I shall hereafter study a little more variety and not stake all a year's labor on a single stable crop. I have seen, yes, and I have *felt* the effects. I am determined to make a part of my farm as good as I can by being "*kind* to the soil." I will see this and the ensuing season, if I am spared, what a liberal and judicious application of manure, and keeping the soil well pulverized, will produce. But one word to those who raise turneps,—don't select a cold, stiff, clayey, tenacious soil—it won't do. I tried it and failed. The experiment detailed above was made upon a loamy soil, somewhat inclined to a gravelly texture.

Your friend and subscriber,

SAMUEL W. SMITH.

AN EXTRACT.

I have seen no class of people, among whom a more efficient system of industry and economy of time was established, than the agricultural population of New England. Their possessions are not sufficiently large to allow waste of any kind. Hence, every article seems to be carefully estimated, and applied to its best use. Their mode of life, is as favorable to cheerfulness and health, as it is eminent in industry.

The farmer, rising with the dawn, attends to those employments which are necessary for the comfort of the family, and proceeds early with his sons or assistants, to their departments of daily labor. The birds enliven them with their song, and the lambs gambol, while the patient ox marks the deep furrow, or the grain is committed to the earth, or the tall grass humbled beneath the scythe, or the stately corn freed from the intrusion of weeds. Fitting tasks are proportioned to the youngest ones, that no hand may be idle.

In the interior of the house, an equal dilligence prevails. The elder daughters take willing part with the mother, in every domestic toil. No servant is there, to create suspicious feelings, or a divided interest. No key grates in the lock, for all are as brethren. The children, who are too small to be useful, proceed to school, kindly leading the little one, who can scarcely walk. Perhaps the aged grandmother, a welcome and honored inmate, amuses the ruddy infant, that she may release a stronger hand tor toil.

The sound of the wheel, and the vigorous strokes of the loom, are heard. The fleece of the sheep is wrought up amid the cheerful song of sisters. Remembering that the fabricks which they produce, will guard those whom they love, from the blast of winter, the bloom deepens on their cheek with the pleasing consciousness of useful industry.

In the simple and abundant supply of a table, from their own resorces, which shall refresh those who return weary from the field, all are interested. The boy, who brings his mother the fresh vegetables, selects a salad which his own hand had cultivated, with some portion of the pride with which Diocletian pointed to the cabbage which he had reared. The daughter, who gathers treasures from the nest of the poultry which she feeds, delights to tell all their history, and to number her young ducks as the swim forth boldly on the pond. The bees, whose hives range near the door, add a desert to their repast, and the cows, feeding quietly in rich pastures, yield pure nutriment for the little ones. For their bread, they have "sown and reaped, and gathered into barns;" the flesh is from their own flocks; the fruit and nuts from their own trees. The children know where the first berries ripen, and when the chesnut will open his thorny sheath in the forest. The happy farmer at his independent table, need not envy the luxury of Kings.

The active matron strives to lessen the expenses of her husband, and to increase his gains. She sends to market, the wealth of her dairy, and the surplus produce of her loom. She instructs her daughters by their dilligence to have a purse of their own, from which to furnish the more delicate parts of their wardrobe, and to relieve the poor. In the long evenings of winter, she plies the needle, or knits stockings with them, or maintains the quiet music of the flax-wheel, from whence linen is prepared for the family. She incites them never to eat the bread of idleness and as they have been trained, so will they train others again; for the seeds of industry are perennial.

The father and bothers, having recess from the toils of busier seasons, read aloud, such books as are procured from the public library, and knowledge thus entering in with industry, and domestic order, forms a hallowed alliance. The most sheltered corner by the ample fire-side, is reserved for the hoary grand parents, who in plenty and pious content pass the eve of a well-spent life.

The sacred hymn and prayer, rising duly from such households, is acceptable to heaven. To their humble

scenery—some of our wisest and most illustrious men, rulers of the people, sages and interpreters of the law of God--look back tenderly, at their birth-place. They love to acknowledge that in the industry and discipline of early years, was laid the foundation of their greatness.

Let the children of farmers feel that their descent is from the nobility of our land. In the homes where they were instructed, are the strongholds of the virtue and independence of their country. If our teeming manufactories should send forth an enervated or uninstructed race —and our cities foster the growth of pomp or the elements of discord—we hope that from those peaceful farmhouses, will go forth a redeeming spirit, to guard and renovate the country of their love. MRS. SIGOURNEY.

Franklin Farmer.

From the Maine Farmer.

Old and New Lands.

MR. HOLMES—In the Maine Farmer of March 6th, Mr. "Ploughshare" inquires which is the most profitable and pleasing, to take a lot of land in the state of nature —in the wilderness, or an old farm under ordinary culture.

I will answer; it depends upon his situation and circumstances in life. A young man with a small capital, would find it much to his advantage to go on to a wild lot of land; and a man of middle age with several boys, would find it equally to his advantage,—if his wife would consent to go into the wilderness cheerfully, for it is necessary that the man and woman should have their minds made up firmly, to be cheerful and contented in their new situation, There are always some inconveniences on a new farm.

It is always necessary to make a beginning one year in advance. Say fall ten acres of trees or more, and be sure to fall them in the best place for building, as near the centre of your lot as the land and public road will admit.

I can say from experience, that I never raised my bread stuff so easy, as when clearing up my new land. It will generally produce from fifteen to twenty-five bushels to the acre, and one bushel of seed wheat or rye to the acre is enough; and it will produce a good crop of grass for eight on ten years,—by that time the smaller stumps will be rotten, and you may begin to plough, and will have good crops without much manure, but better with it. New land produces better feed for pasture than old, and the cows kept on new land will give more and richer milk, and your sheep and young stock will be fat.

In three years after the trees are felled, you can have a decent garden—all kinds of vegetables natural to this country, will flourish among stumps, with currants, gooseberries, plums, &c. You may set out an orchard of young apple trees as soon as the logs are cleared off, and they grow very rapidly.

But on the other hand, if you are unwilling to dirty your hands, smut your face, soil your clothes, and travel on rough roads, do not go into the wilderness, but purchase an old farm in a well settled town, with good neighbors, good roads, and a good market near by, and with a good wood lot attached to the farm.

Taking all things into consideration, Mr. Ploughshare, I think there is the most *pleasure* and *comfort* on the old farm, and the most *profit* on the new; but if you are unable to purchase the old farm without creating a debt of several hundred dollars, then give up a part of yonr pleasure and comfort, and purchase the new lot.

Although I consider the old farms the most pleasant, there are some pleasing things connected with the new one. It is gratifying to man to be an instrument in making the wilderness and the solitary place to bud and blossom as the rose. Man was made to replenish the earth, and God has seen fit to bless his labors, and pay him abundantly for all his care and trouble in beautifying the earth.

Hallowell, March, 1838. J. WINGATE.

BLUE GRASS.

This grass, which constitues the glory of Kentucky pastures, is esteemed superior to all others for grazing.—It flourishes only on calcarious soils. Opinions and practice vary here, as to the best time of sowing it—some preferring September for the same reason, chiefly, which relate to timothy or other grasses, others preferring February or March, to obviate the danger of the tender roots being winter killed. It is sown either on woodland or open ground—in the latter case most generally after a succession of exhausting crops in old fields. If sown on woodland, the leaves, brush and trash must be raked off or burnt. It is particularly important to burn the leaves, else the seed may be blown away with them by the wind, or if not blown away, the leaves may prevent the seed reaching the earth and thus defeat their germination. Many of those who sow in winter, prefer casting the seed on the snow, as it enables them to effect the operation with more neatness and uniformity. In woodlands, the grass must not be grazed the first year, or at all events till after the seeds have matured. In open land, the practice has been adopted by some, of mixing timothy and clover with blue grass, in which case, half a bushel of the latter seed to the acre, is sufficient. The advantage resulting from this is, that it secures at once, a well covered pastured that will bear considerable grazing the first year. The blue grass, in a few years, expels the other grasses, and takes entire possession of the field. On open ground, it is frequently sown in March, upon wheat, rye, or oats. If the season is favorable, it may be sown in April; but should the weather prove dry a great portion of the seed will be lost. It is the practice, we believe, of most graziers, to put upon a given pasture, as much stock as it will maintain, without shifting them during the season, as, besides saving labor, it renders the cattle more quiet and contented. Others, however, fence off their pastures into separate divisions, to undergo a regular succession of periodical grazings. This plan secures a constant supply of fresh grass, very grateful to the animals, and is believed to be more economical, as much less is trampled and rejected by the cattle. The number of animals to the acre, must depend upon their size and the quality and quantity of the grass. The grass on open ground is much more abundant, sweet, and nutricious, than on woodland, and consequently will maintain much more stock, perhaps nearly twice as much; while open woodland will produce much more and better grass than that which is deeply shaded, The best graziers extirpate, as fast as possible, every tree not valuable for timber or wanted for fuel, and some even prune the branches of those which are allowed to remain. But we shall soon, we hope, be able to present this subject more at large, in some numbers which are preparing, on the grazing and stock feeding systems of Kentucky, which we trust will prove interesting to all our readers and particularly instructive to the farmers in the Southern portion of the state of Tennessee. Although we wish well to the tobacco growers on Green River, and would cheerfully lend our aid to promote their particular interests in that pursuit, we wish they could be persuaded to adopt in its stead, the grazing business; for we are confident it is a much more productive and certainly a more agreeable and less laborious one. —*Frankin Farmer.*

From the Farmer's Manuel.

PRESERVING GRAPES.

I last year made a little experiment in preserving grapes on the vine, which I am induced to make public from its success, hoping it may be of service to others who wish to have this fine fruit both in season and out of season.—To almost every one it is known that there are many kinds of grapes that will remain sound on the vine for a long time, if they are not destroyed by birds or wasps.—To prevent this, I have several small bags made, of proper size to contain one or more clusters of grapes, (where they may be contigious,) from some old musquito netting, which was otherwise useless. When the fruit was ripe, I drew them over the finest bunches and tied them tight around the stem. From the season being somewhat wet, I was under the apprehension they might rot, and from time to time gathered some.—but I never found one rotten grape. The last I gathered was on the morning of the first frost, last autumn; which I think was on the 20th November. They were all of the finest flavor possible, and almost as transparent as glass.

The experiment I tried on the Warrenton Grape only. But I have no doubt it would succeed as well with the bland Madeira, Catawba, Isabella, and every other variety of Native Grapes. Any material will answer for bags that will admit a circulation of air. S. ROSE.

Approved Method of Making Good Cider.

Mr. Anderson, a gentleman in England, famed for good cider, gives the following account of his method of making it:

"I should first tell you that my orchards are upon a clay soil, which I think conduces much to the goodness of my cider. I will be short in my practical account, making but few observations, and leave the curious to draw speculative reflections on it. I permit my fruit to remain on the trees till a great part falls by ripeness; then gently shaking the trees, take in the apples in dry weather, laying them in heaps of equal ripeness in a loft over my press. There they remain until they have perspired, and that perspiration ceases. As soon as convenient afterwards, I grind my apples and press out the juice; if it casts a pale color, I suffer the pulp to stand 12 or 24 hours, which will heighten the color of the juice. As soon as it is expressed. I pour it into vats through a seive, where it remains about two days according to the state of the weather and the nature of the apple—the longest when frosty or cool weather—till a thick head of scum rises upon it. Then I draw off a little into a glass to see if it is fine, and as soon as I catch it so, I rack if off without delay into open vats, or into hogsheads. If the juice is racked into vessels larger at top than the bottom, and I rack it off as soon as fine, I need not take off the head or scum, as it will not mix with the cider; but if the casks is straight, or I have neglected to draw it off until it begins to come foul again, I find I do best to take off the head with a wooden skimmer and then draw off as soon as possible. Whenever the brown head begins to open in the middle, or elsewhere, and a witness appears at the openings, I am certain it is time to begin to draw off; but I find from experience, that the surest token is to observe its state by what is drawn off in a glass, and this method should be closely attended to. I have drawn a glass of cider out of a vat at 8 o'clock, foul; another at 10, fine, almost candle bright, without any appearance of the heads opening, as above observed; at 11, it was growing foul fast, without high winds, or any extraordinary event that I could perceive, to occasion it. If then drawn off into open vessels, a fresh head may arise in 24 hours, then it may be racked into a close hogshead, or other receiver, where it will begin to ferment after a day or two, according to circumstances; I then permit it to ferment 3 or 4 days, (never exceeding a week for the hardest fruit,) then I fumigate a clean sweet hogshead with matches of coarse cloth dipped in melted brimstone, and rack off my cider into the cask as quick as possible. If the fermentation still goes on, I give it one more racking in this way, and cover the bung with a tile, until I am sure the fermentation has ceased; I then bung close for the winter.

Remarks. The most important parts of this method of making good cider, are,

1. The time and manner of gathering the fruit.
2. The care and attention in sorting it, in separating the hard from the mellow.
3. The rackings which separate the liquor from the lees, or fine pomace, which causes the fermentation."—*Yankee Farmer.*

Mulberry on poor Soils.

We stated last week, on the authority of the Maine Farmer, that experience had shown the idea, that the mulberry would grow on poor soil, to be fallacious. Dr. Stebbins of this town, an indefatigable experimenter upon the growth of the mulberry, disputes the correctness of the position of the Farmer, and adduces the following fact to show that it is so. In 1836, he set some multicaulis trees on poor, dry soil, and they grew, during the season, from two to five or six feet in height. This year, the same land was sown with wheat, after receiving a light springling of manure. The seed came well, and, at a suitable time, the land received a dressing of lime and ashes. At the usual time of harvesting, there was not sufficient wheat to pay for gathering. Four bushels of seed were sown, and probably four pecks of wheat could not have been harvested. The stocks of wheat could not have been harvested, The stocks of wheat are from four to six inches high.

If the failure in the crop of wheat was owing to want of strength in the land—and we cannot say that it was not—then the position taken by the Dr. that the mulberry will flourish on poor soil, is correct. We saw the land referred to, last week, and the crop of wheat is as stated above, but the soil has nourished a pretty bountiful crop of weeds. It, however, may be what is generally considered poor land, it is certainly very dry and sandy.—*Hampshire Gazette.*

Agricultural Pursuits.

The following Resolution and remarks were offered by Dr. Graham of Northampton, Mass., at the Health Convention recently held in Boston:

Resolved, That a correct understanding of the sciences of physiology and of the laws of health, would effectually promote the agricultural and horticultural interests of the community.

"I regret, said Mr. Graham, that in offering this resolution, at this late hour, I find the time too short and the audience too much fatigued, to warrant my making those remarks on it, which its importance demands and my feelings would prompt.

"The tilling of the ground is the most natural and the most noble, as well as the healthiest employment of man, and the greatest source of subsistence and comfort. Not only, according to sacred history, was the first of our race made of the dust of the earth, but every human body since, has been the offspring of the same mother earth: for we are all made of the same dust—all derive our material subsistence from the same bosom of nature. It is the dust of the earth, incorporated in the vegetable or the animal form, constitutes our nourishment, and is transmuted into our bodies from the very commencement to the termination of our bodily existence. But both in its more primitive condition of inorganic matter, and in various organic revolutions and changes in passing from the earth to the formation of our living bodies, the dust of which we are made, is at every stage—in every form, continually subject to fixed constitutional laws; and hence there are fixed laws of relation between our living bodies and all the forms of matter by which we are sustained; and between these and the earth from which they are composed. It is therefore, an important truth which human beings ought well to understand, that every thing which affects the quality of the soil and the character of its produce, has a most intimate relation, not only to our health of body, but to the general well being of

man. Our wheat, our rye, our corn, our potatoes, and every other vegetable substance entering into the food of man, are rendered more or less healthful according as our agricultural and horticultural operations are more or less in conformity with the physiological laws of our nature.

"But interesting as this topic is, I must not on the present occasion extend my remarks. Yet I could wish that every tiller of the ground throughout the world were an enlightened—a thoroughly scientific physiologist.—The importance of a liberal education in this class of men has been too greatly overlooked; and hitherto it seems generally to have been thought that the cultivation of the soil requires but a small stock of knowledge, and no scientific attainments; and hence, even in our own agricultural country, the vocation and standing of the farmer have been too commonly considered as less reputable than those of the merchant, the professional man, &c. This is wrong—it ought not be. The caltivators of the soil ought always to be regarded as the true nobility of the country, and they ought, therefore, to be among the most intelligent—the most liberally educated—the most extensively scientific members of society. Geology, mineralogy, chemistry, meteorology, botany, zoology, physiology, and other natural sciences, are of more immediate interest to the tillers of the ground than perhaps any othor men; and when things are rightly understood and rightly ordered, such qualifications will be the ordinary attributes of our agriculturists, and the tilling of the ground will be regarded as it should be, the noblest and most honorable employment of man."—*Northampton Courier.*

Tomatoes Preserve.

The tomato is favorably mentioned in your last number: it is a valuable vegetable. But I do not recollect, that in the variety of uses to which it has been applied, your paper assigns it any place among the different species of preserves. As we are deprived this season of that pride of the fruit of Georgia, the *peach*, it may be of service to housekeepers to know that the tomato forms a most admirable substitnte for the peach as a preserve. The flavor is almost precisely the same—it looks as well, and is altogether an excellent article for the tea table.

Directions.—Take good ripe tomatoes, peel them and preserve them with good brown or loaf sugar. If not peeled they burst, and do not retain the consistency so much desired by housekeepers, though they are very good without peeling. I give you this, at this time, that the industrious of the fair hands about your flourishing town may profit by it, before *Jack Frost* shall cut off their hopes from this new source of table ornament and luxury.—*Southern Planter.*

Preserving Mulberry Trees throughout the Winter.

Many persons who desire to engage in the cultivation of the Morus Multicaulis, are deterred from purchasing trees in the fall, when they can be bought from 20 to 40 per cent. cheaper than in the spring, through fear that they may not be able to preserve them until the planting season. Keeping the Morus Multicaulis through a winter, with perfect safety and with trifling expense, is an easy matter. The trees may be kept in a cellar, with dry earth about their roots, or they may be lain down horizontally on the ground in layers two feet thick, and be covered with dry sand. Both these modes are perfectly safe, and will answer the purpose. We, however, prefer another method, which is as follows:—Dig a pit in the ground from two to three feet deep, according to the length of the trees—tie the trees loosely in bundles of fifty or one hundred each, and place them in the pit, roots downward, near together; fill the space between the bundles with earth, so as nearly to cover the tops of them. We prefer this method because it is less labor than the others, and equally safe. It should be understood that we now speak of the manner of preserving trees of one summer's growth, to be planted for propagation. Those who may desire to obtain trees, will no doubt best consult their own interest by purchasing in October and November, should holders be willing to sell at that season, as they can be procured cheaper, and there are then better assortments to select from. The many applications we are every week receiving for Morus Multicaulis, to be delivered the ensuing fall, and the generous prices that purchasers are willing to pay, have induced a belief that the supply of trees will by no means equal the demand, and that it will not be possible to obtain them next spring unless at extravagant prices. It is true that there are many of the Morus Multicaulis now growing in this vicinity, but not half the number that were expected by those who are engaged in their culture, and greatly as the trees increase in number, the purchasers multiply in a much larger ratio. The public are well satisfied that our country can produce silk in abundance, that the Chinese Mulberry is every thing that its friends claim for it, and that its propagation will be a good business for at least 20 years to come.—*Silk Grower.*

IRRIGATION.

The Salem Observer has some excellent remarks on the use that may be made of the natural springs in the mountains and hills of our country in irrigating the lands—We select the following:

"There is always water enough in the bowels of the earth; and the drawing it forth and the diffusion of it are not so difficult and expensive matters as might at first be imagined. A common well, sunk in a favorable spot, with simple horse power applied to a common pump, would in a dry time be found of great benefit even to acres. Many fields are so situated that the springs in the neighboring hills, with little ingenuity and not much expense, might be made to diffuse their animating contents over them, greatly to the advantage of any kind of crop. Artificial means of watering would be found beneficial in the most ordinary seasons; but in times of great drought, of incalculated benefit. The most flattering promises of abundant crops have, in many cases, been destroyed by the recent hot and dry time which has been experienced in this state and elsewhere.

Irrigation is much employed in many countries in Europe, and with great advantage. In Italy there is scarcely a field or a garden which is not furnished with the means of artificial watering. The Milanese territory exhibits the greatest expanse of irrigation known in Europe. In that country are to be seen noble canals, running in every direction for this purpose. They are under the authority and protection of the government, which lets out the water to the various occupiers of meadows, at a fixed rate, according to the quantity supplied Sometimes these canals are farmed out by putting up the several sluices at auction; in other instances the canals go with the lands."

To guard against Horse Flies.

In order to prevent horses being teased with flies, take two or three small handfulls of waluut leaves, upon which pour two or three quarts of soft cold water, let it infuse one night, and pour the whole, next morning, into a kettle, and let it boil for a quarter of an hour; when cold, it will be ready for use. Nothing more is required than to moisten a sponge with the liquid, and before the horse goes out of the stable, let those parts which are most irritable be smeared over with the liquor, viz. between and upon the ears, the neck, the flank, &c. Not only the lady or gentleman who rides out for pleasure, will derive benefit from the walnut leaves thus prepared, but the coachman, the wagoner, and all others who use horses during the hot months.

Fram the Cultivator.

To Harvest Beans.

Lake County, Ia., 9th Oct. 1837.

The following easy and simple method of saving a crop of Beans, is worth the price of ten years subscription to the Cultivator, to every person that never practised it, who wishes to cultivate that valuable crop. By this method, beans may be planted in a field by themselves, may be pulled while the vines are entirely green; and will be perfectly cured, no matter how wet the weather; and what is more, need not be housed or thrashed until such time as may be convenient. This is the plan.

To cure Beans.

Take poles or stakes (common fence stakes) into your bean field, and set them stiff in the ground, at convenient distances apart, which experience will soon show you, and put a few sticks or stones around for a bottom, and then, as you pull an armfull. take them to the stakes, and lay them around, *the roots always to the stake*, as high as you can reach, and tie the top course with a string, or a little straw, to prevent them from being blown off, and you never will complain again, "that you cannot raise beans, because they are so troublesome to save." They are the easiest crop ever raised, to take care of. Try it, and you will then know it, and thank me for telling you of it.

Your friend, SOLON ROBINSON.

Watering Isabella Grape Vines.

Some years past a gentleman recommended, at a meeting of the New-York Horticultural Society, plentiful watering of the native grapes just as they begin to change their color after obtaining a full size. Mr. Aymar, of this city, has tried it for two or three years. He cuts a trench near the stem, and keeps it well supplied with water, principally from the wash of the kitchen. Mr. A says it improves the flavor of the grapes, and makes them more melting, like the foreign.—*N. Y. Farmer.*

GRAIN WORM.—The farmers of this country, generally, complain of the appearance of a worm in their wheat. It is said that two or three kernels in every head of wheat is said to contain a worm which completely fills the kernel to the exclusion of the grain. This worm must have been in the shell of the kernel, while the wheat was in the milk, where it has since remained. Whether it will occasion any further injury by extending to other grains, remains to be seen.—*Goshen Dem.*

On the benefit of using straw as Top-dressing for Young Clover.

As the time is near at which farmers generally haul out the straw which the farm produces, beyond what is requisite for the support of its stock, I take the liberty of recommending the appropriation of some of it to an object worthy of their attention, but which hitherto seems to have been entirely neglected; that is, as a top-dressing to wheat, for the purpose of ensuring clover on spots which otherwise would be entirely destitute of vegetation. The first numbers of the Register contained several articles on the subject of scattering straw, which attracted my attention, and for some years I followed the course there recommended; that is, to haul out the surplus straw as back loads, when bringing in the crop of wheat to the machine, and then at some convenient time to spread it. This method has its advantage, as it is hauled out with little or no loss of labor; but here it ends, and the disadvantages begin; for this was never as valuable as the one which I pursue, and for this simple reason, that the poor spots on which it had been spread, had failed to take in clover; and then, instead of the heavy growth of clover which it can produce, we had to depend on the modicum of straw which we had applied for the improvement. My course is now, to apply the straw immediately after sowing clover seed, and the result has exceeded my most sanguine expectations; for at this time, I have clover on poor spots thus treated, much better than on land much richer; and it is now better than it would have been for years to come, had it been left as such spots generally are. It may be said that fine manure would be better, as by that not only the clover, but the wheat would be improved by it. I admit the truth of this, provided it could be done; but when we reflect on the labor requisite to accomplish top-dressing on as large a scale as the impoverished condition of Virginia requires, it seems out of the question even to hope that, as a general thing, it will ever be accomplished. In recommending the above course, I go upon the idea, that in agriculture, as in government, we should be content with the most practicable scheme, and leave to others the pursuit of theories as beautiful as they are difficult; and furthermore, I shall be content to have this tried as an auxiliary, for one trial will suffice to fix our attention to it; for when we take into consideration the facility with which straw is moved, and the surface over which a load will extend, I hazard little in saying, that there is no way in wich as much improvement can be effected; and furthermore, I contend, that even admitting that our lands have strength enough to ensure clover, we should find our account in this application, as it is the infancy of the clover that it gives an impulse which no application, made at the latter period of its growth, can give.—*Farmer's Regiiter.*

AGRICOLA.

P. S. If farther proof of the excessive drought of 1837 is necessary, permit me to mention a fact which came under my ovservation about the middle of March. I had a ditch cut through a portion of my low grounds, and I found that the clay, at the distance of three or four feet under ground, was completely dry, so much so indeed, that as it was thrown out, it could be converted into dust without difficulty. What makes it more remarkable is, that an entire winter's snow and rain had not been adequate to its correction.

Grind your Provender.

Those who have much provender to give to their, cattle, or hogs, will find themselves to be gainers by grinding their grain, be it oats, barley or corn. One reason of this undoubtedly is, that as it is deprived of the external coating, which was given it by nature to defend it from external operations, the gastric and other juices, which are necessary to be incorporated with the food in digestion, can have more complete and thorough access to it, and consequently more of the nutritive matter will be converted into chyle, and be more perfectly assimilated with the animal system. Some who have used provender both ways and marked carefully the results, do not hesitate to say that the ground is twice as good, or will produce twice the amount of nourishment and fat, that the unground will.—*Maine Farmer.*

From the New England Farmer.

THE WAY TO MAKE GOOD BUTTER IN AUGUST.—Salt the milk before you strain it, at the rate of a heaped spoon of salt to a pail-full. Let it stand 24 or at most 36 hours. The first pan of milk you skim, put another heaped spoon of salt to the cream; add cream from day to day as you skim your milk. Churn three times a week or at least twice. Use a stone churn if you can conveniently obtain one. Set your churn in a pail of the coldest water, and change it as it grows warm by standing while you churn. Keep your cream in white earthen or a wooden bowl. It is injurious to health to use brown earthen ware for any thing salt or acid. These directions are for a small dairy of one or two cows. A HOUSEKEEPER.

SELF INVENTION.

We were much gratified a few days since in passing through Lee with the ingenious arrangement for obtaining or rather conveying water, adopted on the farm of Mr. Cornelius Basset. His house and barn stand on a side hill, and it was not easy to procure water for his cattle. He has a small stream of a permanent character and of excellent water flowing at the bottom of the hill, 20 or it may be 30 rods from his barn yard. He has here placed a small water wheel in a cistern filled by the brook, which is constantly turned by the stream; and, through logs laid to the yard, by means of a forcing pump operated by this wheel the water is sent up to his barn yard and there flows in a constant supply. The whole is a miniature example of the Fairmount Water Works in Philadelphia; and the experiment succeeds to admiration. The expense is trifling as the diameter of the wheel is not more than four feet. The whole is enclosed in a wooden box, so as to be easily covered in winter, and secured from frost. The arrangement reflects honor upon his ingenuity, and his whole farm is a beautiful example of neat, industrious, and highly intelligent cultivation.—*New England Farmer.*

Hoffwyl Agricultural School.—An American who has recently travelled in Europe, paid a visit, which afforded him high gratification, to M. Fellenburgh's school, in Switzerland. He saw there a student from New-York city, who informed him that there were several other boys in the school from the place. "There were pupils on the ground." he adds "from Switzerland, Germany, France, Spain, Portugal, North and South America, and two from Tifflis." When shall we become wise and imitate the good, as we are ever ready to do the bad examples of European ancestry. When shall *we* establish schools of scientific and practical agriculture for our sons? Whenever their importance shall be duly appreciated—and our citizens consult their true interests in endeavoring to promote the best interests of their country—of their whole country.—*Cultivator.*

Stealing Fruit is one of the most aggravating and insufferable annoyances to which an invidual or family can be subjected. It is practiced in this and every other town, by idle, vicious boys, and sometimes by despicable fellows who call themselves *men.* Every year depredations are committed on private fruit orchards in this town. Cannot such an evil, such outrages be stopped? Cannot *one* of these miscreants be arrested and brought before the public and disgraced by fine and imprisonment? The experiment will now be tried. Vigilant efforts and well concerted plans are laid, and if these rascals are not now *entrapped* by the *leg*, they will be by the strong grasp of a peace officer. Beware!

Stones Wanted.

A Liberal price will be paid forPeachand Plum stones delivered soon at the Rochester Seed Store.

sep15 REYNOLDS & BATEHAM.

A Farm for Sale.

THE subscriber, offers for sale a farm, containing one hundred and sixty-six acres of choice land. One hundred and twenty-five under improvement, and the most of it first rate grain land, situated at Hanover centre, in the county of Chautauque, two miles from Silver Creek Harbor, three from La Grange, four from Irving Harbor, and four from Farrestville.

There are upon the premises, two dwelling houses, one of them a large two story building, with commodious out buildings, orcharding, &c.

This farm is pleasantly situated, the soil of a superior quality, and is considered by competent judges, one of the most desirable farms in the county.

For terms, apply to David Seymour, on the premises, or to the subscriber at Lodi, Erie county.

JOSEPH PLUMB.

September 15th, 1838.–w8m2

Morus Multicaulis.

THE subscribers are prepared to furnish Chinese Mulberry, or Morus multicaulis trees, in large or small quantities, delivered any time this fall after the first of October, or they will contract them delivered in the spring.

The trees were raised in this climate from layers, are from two to three feet high, of thrifty growth and matured wood, and will be sold at the lowest prices, in proportion o their size.

October and November are the most favorable months to transport them to the Western states or into Canada, or in any direction where they must be sent a distance by water communication.

Applications for Trees may be made at the Green House on Sophia-street, where they will be kept, or at the Seed Store in the Arcade; and orders from a distance, by mail, should be sent early, addressed to

REYNOLDS & BATEHAM.

July 28, 1838. *Rochester, N. Y.*

SHEEP.

FOR SALE, at a bargain, to close a concern, a small flock of pure old fashioned Merino Ewes; also, a few pure Bakewell Ewes, and a mixed flock of South Down, Merino, and Bakewell.

Buffalo, Sept. 1, 1838.–w4m1 A. B. ALLEN.

Sale of Impoved New Leicester Sheep.

40 EWES and RAMS of this celebrated breed will be *Sold by Auction* at the old Norton Farm, East Bloomfield, 5 miles west of Canandaigua, Ontario Co. N. Y., on Wednesday, the 17th of October next; some of which are of those imported in 1834, and the remainder from the said stock breed upon the farm of their present owner: by whom the former were selected from the flocks of the most ancient breeders in England. They will be sold without reserve, either singly or in such lots as purchasers may wish. Liberal credit will be given on approved notes or good security.

September 1, 1838. THOMAS WEDDLE.

SAXONY SHEEP FOR SALE.

40 RAMS & 60 Ewes of the pure Electoral Saxon Race. The subscriber imported 100 yearling Ewes and a number of Rams in 1827 which were selected by himself from the purest race in Saxony, and with which he commenced his flock, and not only mantained them in all their purity of blood, but improved them in size, symmetry of form, and quantity and quality of wool. The above number of Ewes will either be sold or let for a term of years, and can be increased to 75 or 80 if desired.

H. D. GROVE,

Buskirks Bridge Post Office, Washington Co. N.Y.

August 25, 1838–3m*

SUGAR BEET SEED.

THE Subscriber has now for sale 800 lbs. of the White French Sugar Beet Seed of the present years growth. Great pains have been taken in its cultivation, and the seed will be warranted equally as good, if not better than the imported. A quantity of the seed was put in the ground since they ripened, and every one germinated and grew. Those wishing to purchase are requested to forward their orders previous to the close of navigation. All communications on the subject, and of raising the beet, will be promptly attended to. Address the subscriber, as Post Master, Royalton, Niagara county, N. Y

SHERMAN M'LEAN.

September, 1, 1838.–w3m1

MULBERRY TREES.

200,000 GENUINE Mulberry Trees, and as many more as may be wanted, of the most approved kinds—consisting of the best selected varieties now in use for cultivation, feeding worms, and making silk; being acclimated to this country, and adapted to either warm or cold climates, affording a rare opportunity for Companies or individuals to be supplied, from the most extensive collection of Mulberry trees ever seen in any village within the United States.

Autumn is decidedly the best time for removal, and orders left with

Messrs. I. B. Colt, Sec'y of the Connecticut Silk Manufacturing Company, Hartford; Alonzo Wakeman, at the office of the American Institute, No. 187 Broadway, N. Y.; Thomas Lloyd, Jr. No. 236 Filbert street, Philadelphia, Pa.; Luther I. Cox, Baltimore, Md.; B. Snider & Co. Savannah, Ga; Bliss, Jenkins & Co. Mobile, Al.; James Lyman, St. Louis, Mo.; Case & Judd, Columbus. O.; G. Harwood, Rochester, N. Y.; and the publishers of this advertisement, or with the subscriber, in Northamp, ton, Mass.

Orders left with the above gentlemen will be promptly attended to, and each will be furnished with samples of the foliage.

Several valuable farms may be had with or without Mulberry Plantations. Apply at the office of

D. STEBBINS.

Notrhampton, Sept. 1, 1838.–10t*

Silk Business.

PERSONS who intend doing an extensive business next year with the Mulberries, can be supplied with the *true genuine Morus multicaulis* trees and cuttings, by sending in their orders early. Companies that wish to contract for large quantities, can be supplied on reasonable terms. The trees are to be well packed, so as to be sent to any part of the United States, and delivered this fall. The subscriber has been extensively engaged in the culture of silk for some years, particularly to the production of the Morus multicaulis; and will be hapyy to give any information respecting the tree or feeding the worm that may be required—silk, worm eggs, &c.

All letters will meet with immediate attention if assingned to EDWARD H. ARNOLD.

Burlington, New Jersey.

N. B. As orders are coming in now, it would be well for those in want to apply early. Aug. 1838.–3m*

Imported Sheep for Sale.

TO be sold, ten Leicester Bucks. These animals were selected from some of the best flocks in England, and imported last year by their present owner. Also, an imported Devon Bull. Apply to

JOHN COWLEN,

Aug. 4, 1838.–3t *Truxton, Cortland Co., N. Y.*

New Arrival of Turnep Seeds.

WE have just received from England a large additiona supply of Turnep Seeds, among which are the following kinds:

Ruta Baga, or Yellow Sweedish,
Dale's Yellow Hybrid,
Yellow Bullock, Yellow Scotch,
Yellow Aberdeen, Red Round,
White Globe or Flat,
White Norfolk, Long Tankard,
Early White Flat Dutch,
White Stone, Yellow Stone,
Yellow Malta, Yellow Dutch.

☞ See descriptive list on page 198, current vol. Genesee Farmer. REYNOLDS & BATEHAM.

Rochester Seed Store. June 23, 1838.

Farmers' Books.

NOTICES on the Sugar Beet, containing a description of the culture and preservation o the plant; also explanations of the process of extracting its Sugar. Price 25 cts.

A Manual of the art of making and refining sugar from Beets. Price 75 cents.

Cobb's Manual on the Culture of Silk.
Chaptal's Agricultural Chemistry.
The Complete Farmer, by Fessenden.
Fessenden's American Gardener.
A Guide to Orchardists.
Smith's Treatise on the Honey Bee.
A Treatise on Cattle.
Mason's Farriery.
Barnum's American Farriery.
Vols. 1st and 4th, Genesee Farmer, bound.

For sale by D. HOYT,

Rochester, May 26 1838. Bookseller, 6 State st.

Fruit Trees for Sale.

THE subscriber respectully informs his friends and the public, that he has for sale at his Nursery in Rochester, Monroe county, state of New-York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.

April 15, 1838.

N. B. Cash will be paid for a few thousand two years old Apple Trees.

Monroe Horticultural Garden & Nurseries, Greece, Monroe County, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1838. ASA ROWE.

ELECTION NOTICE.—*Sheriff's Office, Monroe County, Rochester, July 19th*, 1838.—A general election is to be held in the county of Monroe, on the 5th, 6th and 7th days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed.

DARIUS PERRIN, *Sheriff.*

State of New-York, Secretary's Office, Albany, July 16th, 1838.—Sir: I hereby give you notice, that at the next General Election in this State, to be held on the 5th, 6th and 7th days of November next, a Governor and Lieutenant Governor are to be elected.

I also give you notice, that a Senator is to be chosen in the Eighth Senate District, in the place of Isaac Lacy, whose term of office will expire on the last day of December. JOHN A DIX, *Secretary of State.*

To the Sheriff of Monroe county.

N. B. The Inspectors of Election in the several towns in your county, will give notice of the Election of a Representative to Congress from tho 28th Congressional District. They will also give notice of the Election of Members of Assembly, and for filling any vacancies in county officers which may exist. July 28, 1838.